Application No.: 10/761,816
Filed: January 20, 2004
TC Art Unit: 1723
Confirmation No.: 9984

REMARKS

The pending claims have been rejected as obvious over Frechet in view of Xie. This rejection is respectfully traversed for the reasons indicated below and reconsideration is requested. Claim 5 has been amended to recite explicitly that the polymeric monolithic separation medium formed in practice of the method is attached covalently to the inner surface of the separation capillary column or channel.

It is the Examiner's position that Frechet discloses all the limitations of the claims but degassing the polymerization mixture and maintaining the polymerization mixture under positive pressure during the polymerization step. The Examiner then looks to Xie, which the Examiner asserts discloses these missing limitations.

First, the Applicants submit that those of ordinary skill wishing to improve on the methods disclosed in Frechet would never look to the patent of Xie for the teachings it could provide. Frechet teaches the preparation of porous polymeric monoliths in *micro*channels, which have dimensions on the order of 1-200 x 10-70 μm, e.g., as described at col. 6, lines 41-45. On the other hand, the separation system taught in Xie features columns that are orders of magnitude larger (*see*, e.g., Example 1 at col. 40, line 9, where it is recited that a stainless steel

column (4.6 mm inner i.d. and 50 mm length) is used). Those of ordinary skill know that very different techniques, or "tricks," are required to translate lessons learned in preparing a macroscale column to the "ultranarrow" range.

However, even if the teachings of Frechet and Xie were combined, the combined teachings would still not cover all of the limitations of Applicants' claim 5 and the claims dependent thereon. For example, a combination of Frechet and Xie still would not teach the limitation of the first step of method claim 5, that the provided unfilled capillary column must be "open at both ends thereof" or the limitations of the third step of claim 5, (1) that the "mixture is continuously maintained under positive pressure applied from the open ends of said column or channel" during the polymerization process and (2) that "a polymeric monolithic separation medium attached covalently to said inner surface is formed" in the column. Thus, the Applicants submit that the rejection has been overcome.

In the accompanying supplementary Invention Disclosure Statement, the Applicants cite newly discovered US Published Patent Application No. US 2002/0088753 of Huber. The Applicants submit that the pending claims are also non-obvious over a combination of all three of Frechet, Xie and Huber. First, the Applicants submit that those of ordinary skill in the art would

never look to combine Huber with Xie, for the same reasons that Frechet and Xie are not properly combinable. However, even a combination of all three references would not disclose the method of the invention as particularly claimed. For example, Huber teaches at [0061] that the disclosed monoliths are made in "a rigid tube *sealed at both ends*" and not, as claimed by the Applicants (independent claim 5), in a column wherein "said mixture is continuously maintained *under positive pressure applied from the open ends of said column.*" Therefore, Huber does not make up for the deficiencies of a combination of Frechet and Xie, as discussed above.

Thus, the Applicants submit that all claims in the application are in condition for allowance and such action is respectfully requested.

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The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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